

Docket 83025JDP
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Jiebo Luo, et al.

DIGITAL IMAGE MULTITONING
METHOD

Serial No. 09/896,798

Filed 29 June 2001

Group Art Unit: 2625

Examiner: James A. Thompson

Confirmation No. 8281

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPELLANT'S REPLY BRIEF

Status Of The Claims

Claims 1-15 and 17 have been cancelled pursuant to appellant's response mailed March 6, 2007.

Claims 16 and 18-26 stand finally rejected and are the subject of this reply.

Grounds of Rejection to be Reviewed on Appeal

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Claims 16 and 21-23 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar).
2. Claims 18 and 24 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 6,501,566 (Ishiguro).
3. Claim 19 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 4,945,478 (Merickel) and in view of 5,565,994 (Eschbach).
4. Claim 20 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar), and further in view of U.S. Patent No. 4,945,478 (Merickel) and in view of 5,565,994 (Eschbach) and lastly in view of U.S. Patent No. 5,621,546 (Klassen).
5. Claim 25 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 5,565,994 (Eschbach).
6. Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 5,565,994 (Eschbach) and lastly in view of U.S. Patent No. 5,621,546 (Klassen).

Remarks

In response to the Examiner's Answer, the feature of Claim 16 at issue is 'repeatedly revising a constant number of clusters K.' The Examiner's Answer is understood to agree with Appellants' characterization of the outstanding rejection of this feature made in their Appeal Brief, pages 9-10. See pages 13-14 of the Examiner's Answer. Namely, the Examiner is understood to take the position that Murayama teaches a constant number of clusters and that one of ordinary skill in the art, reading Revenkar's teaching of repeatedly revising a changing number of clusters, would have a reason to and would know how to modify Murayama to repeatedly revise its constant number of clusters.

Appellants respectfully disagree. How, without using hindsight, would one of ordinary skill in the art, learning how to repeatedly revise a changing number of clusters from Revenkar, know how to repeatedly revise a constant number of clusters according to Murayama? By analogy, assume that Claim 16 pertained to 'sorting apples', where 'sorting' refers to 'repeatedly revising' and 'apples' refers to 'a constant number of clusters.' In this case, Murayama would teach 'apples', and Revenkar would teach 'sorting bananas', where 'bananas' refers to a 'changing number of clusters.' It is not necessarily obvious to take only 'sorting' from Revenkar, which says nothing about 'apples,' and apply it to Murayama, which says nothing about 'sorting.'

To elaborate, the Murayama Patent is understood to pertain to reducing the number of color shades (also referred to as gradations) in an image. See col. 1, lines 6-12. This approach is described to be useful for reducing the number of color shades of an image acquired by a CCD camera so that the image can be displayed on a display device (such as an LCD display) capable of displaying fewer color shades than the CCD camera. See col. 1, lines 15-33. Accordingly, the 'clusters' referred to the Murayama Patent are a number of threshold values needed to convert the larger number of color shades in an image acquired by a CCD camera into a fewer number of color shades able to be represented by an LCD display. See col. 1, lines 42-44 and col. 2, lines 50-53. For example, to reduce a larger number of color shades to four color shades, three threshold values are needed. See col. 1, lines 42-44. To reduce a larger number

of color shades to eight color shades, seven threshold values are needed. See col. 2, lines 50-53.

Since the number of color shades to be reduced to is known, e.g., the number of color shades an LCD display is capable of displaying is known, it can be understood why the number of clusters (i.e., thresholds) in Murayama are constant. For example, if you want an image to be displayed on an LCD screen that is capable of showing four color shades, then it is known that the image must be reduced to four color shades, which requires the use of three threshold values (i.e., a constant number of clusters). See col. 1, lines 42-44 of the Murayama Patent. In this regard, Appellants respectfully submit that the Examiner has not provided evidence regarding how or why the Murayama Patent could or would be modified according to the Revenkar Patent to include a changing number of clusters.

For at least these reasons, Appellants respectfully submit that the Examiner has not established that Claim 16 is obvious in view of the Murayama Patent in view of the Revenkar Patent. Accordingly, Appellants respectfully request reversal of the corresponding rejection.

No fees are believed due for the present Reply Brief. If, however, fees are due, then the Commissioner is authorized to charge the requisite petition fee to Deposit Account 05-0225.

Respectfully submitted,

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585)477-4656.